



PHYSICS

BOOKS - CHETANA PHYSICS (MARATHI ENGLISH)

MODEL ACTIVITY SHEET

Exercise

1. 1 kWh = _____ A. $36 \times 10^6 J$ B. $3.6 \times 10^6 J$ C.

$0.36 \times 10^6 J$ D. $3.6 J$

A. $36 \times 10^6 J$

B. $3.6 \times 10^6 J$

C. $3.6 \times 10^6 J$

D. $36 \times 10^9 J$

Answer:



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2. The number of electrons in the outermost shell of caesium is __.

A. 3

B. 4

C. 1

D. 6

Answer:



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3. The specific heat capacity is measured in C.G.S. system in _____.

A. cal

B. kcal

C. $\text{cal} / \text{g}^\circ \text{C}$

D. $\text{joe} / \text{kg}^\circ \text{C}$

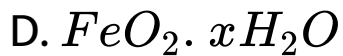
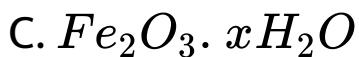
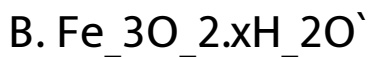
Answer:



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4. The chemical formula of the rust is

A. $\text{FeO} \cdot x\text{H}_2\text{O}$



Answer:



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5. In which block of the modern periodic table are the non-metals present?

A. s-block

B. p-block

C. d-block

D. f-block

Answer:



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6. Complete the analogy:

Concave Lens:Myopia: : Convex Lens:_____.



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7. The following group of elements have similar chemical properties. Identify with reason whether it is a Dobereiner's triad
N(14.00),P(30.9),As(74.9).



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8. True or false

The filament in the electric bulb is made of a wire with high melting point



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9. For the given polymer, give the name and structure of its constituent monomer

Polystyrene.



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10. Give scientific reasons:

In cold regions in winter the Pipes for water supply break and even rocks crack.



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11. Give scientific reasons:

Carbonate and sulphide ores are usually converted into oxides during the process of extraction



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12. We cannot clearly see an object kept at a distance less than 25 cm from the eye.



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13. What do you mean by dispersion of light?



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14. Draw the structural formula of the following

3-methyl pentane



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15. Write balanced chemical equation for the given word equation
Copper + Conc. Nitric acid
→ copper nitrate + Nitrogen dioxide + water



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16. The focal length of a convex lens is 20 cm. What is the power?



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17. Define : Centripetal force



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18. Define : Centripetal force



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19. Write the laws given by Kepler. How did they help Newton to arrive at the inverse square law of gravity ?



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20. Suppose the orbit of a satellite is exactly 35780 km above the earth's surface. Determine the tangential velocity of the satellite ($G = 6.67 \times 10^{-11} Nm^2 / kg^2$, mass of the earth = 6×10^{24} kg, Radius of the earth = $6.4 \times 10^6 m$)

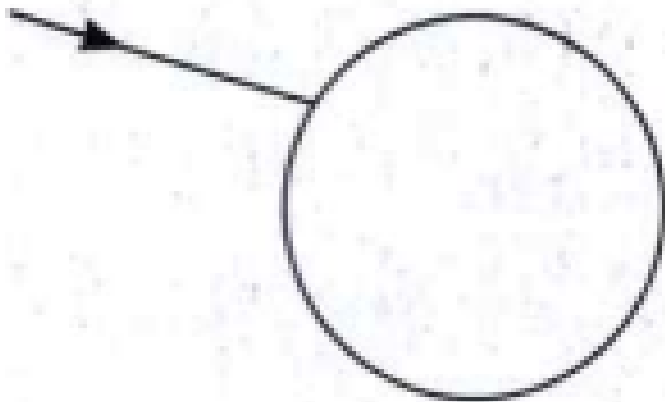


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21. Merits of Modern periodic table over Mendeleev's periodic table

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22.

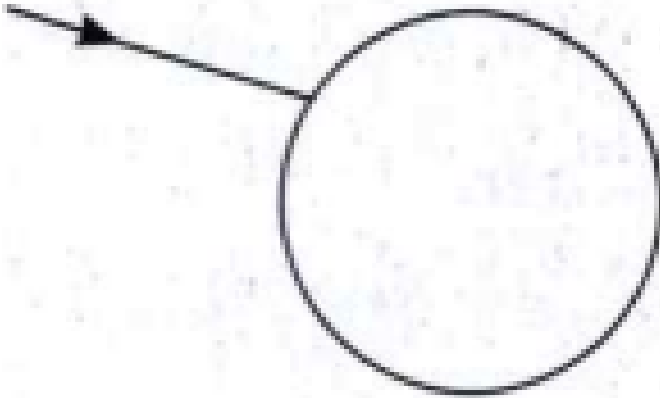


Complete the diagram of rainbow formation.



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23.



name the phenomenon of light involved in the given process.



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24. What is Combination reaction? Give one example with balanced chemical equation



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25. What is redox reaction?



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26. The force of Gravitation between two bodies having irregular shape is taken to be the distance between their :



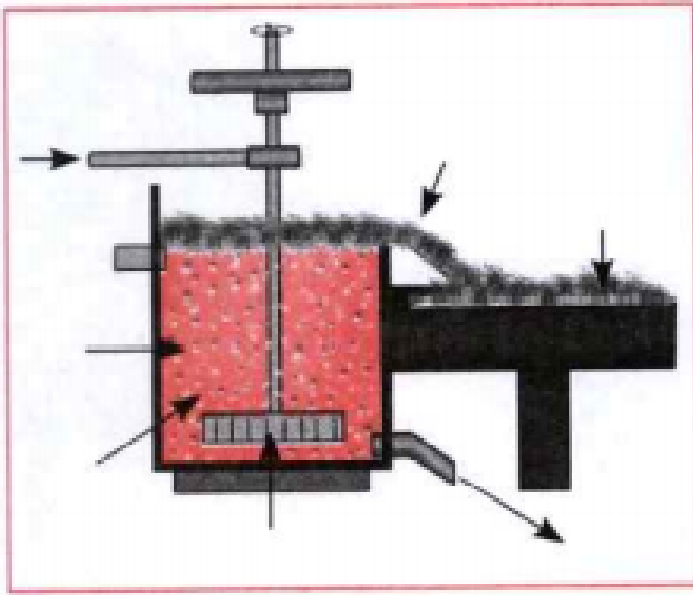
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27. If the distance between the two bodies is tripled, what will be the Gravitational force between them



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28.



Redraw the given diagram, label the parts and name the diagram.



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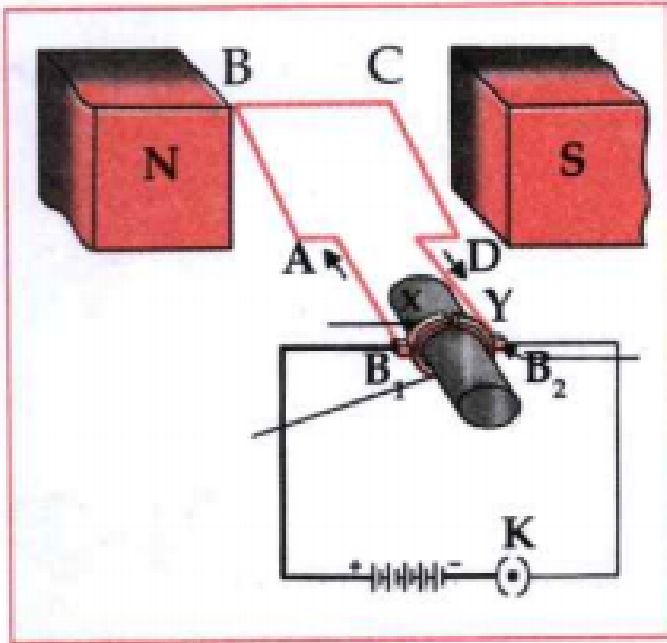
29. State the law: Mendeleev's Periodic law.



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30. Redraw the diagram making necessary changes in the diagram to convert it into AC

Generator.



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31. State the principle of working of a Generator.



32. Complete the paragraph.

(DCBA, B_1 to B_2 , right, left, ABCD, B_2 to B_1)

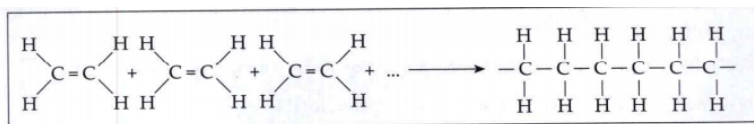
In AC generator, according to Fleming's _____ hand rule, electric current is produced in the branches AB and CD. Thus, the current flows in the direction _____. In the external circuit, the current flows from _____ through the galvanometer. If instead of one loop coil, a coil consisting of several turns is used, the current of magnitude several times

flows. After half rotation, the branch AB takes the place of branch CD and the branch CD takes the position of the branch AB. Therefore, the induced current goes as _____



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33. Observe the given reaction and answer the question given below.



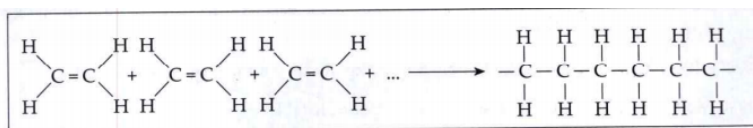
What

type of reaction is it? Define it



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34. Observe the given reaction and answer the question given below.



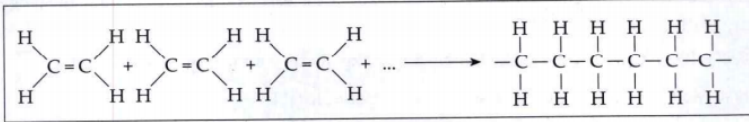
Name

the reactant and the product



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35. Observe the given reaction and answer the question given below.



Give the

uses of the product/products.



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36. The process by which nucleotide in the gene suddenly changes its position is called _____.

- A. translation
- B. translocation
- C. mutation

D. transcription.

Answer:



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37. Carbon dating method measures the radio activity of C-14 and the ratio of _____ present in the organism's body.

A. C-12 to C-14

B. C-6 to C-7

C. C-14 to C-12

D. C-14 to O-16

Answer:



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38. The forest Conservation Act was enacted in

_____.

A. 1980

B. 1986

C. 1972

D. 1963

A. A. 1980

B. B. 1986

C. C. 1972

D. D. 1963

Answer:



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39. _____ is not a component of nuclear power plant.

A. control pods

B. gas turbine

C. steam turbine

D. condenser

A. A. control rods

B. B. gas turbine

C. C. steam turbine

D. D. condenser

Answer:



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40. Choose the correct alternative and write its alphabet against the sub - question number :

Vinegar is the chemically acid.

A. Citric

B. Gluconic

C. Glutamic

D. Acetic

Answer:



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41. Name the following.

First record of human like animal in the form of ape from East Africa.



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42. Name the following:

Bacterial strains which convert milk to Yoghurt.



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43. State whether the given statements are True or False. Correct the false statement.

Radiations of cell phones penetrate the bones of adults more effectively than the bones of children.





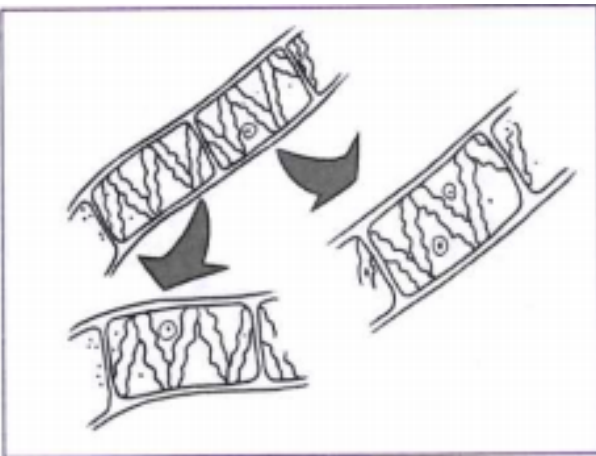
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44. Forest conserved in the name of God



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45. What is the type of asexual reproduction shown in the diagram below?





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46. Give scientific reasons:

Oxygen is necessary for complete oxidation of glucose.



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47. Give scientific reasons:

Body temperature of reptiles is not constant.



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48. Give Scientific Reasons :

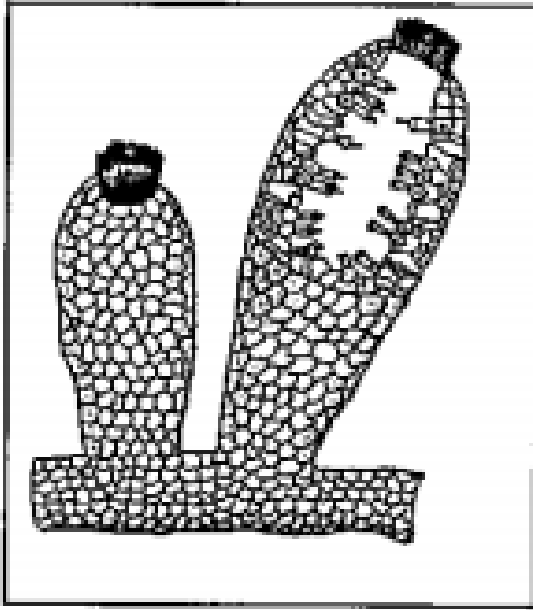
The constructions of turbine is different for different types of power plants.



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49. Identify the phylum of the given animal and write any two characteristics of this

phylum.



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50. What do we learn from the story of Jadav Molai Peyang?

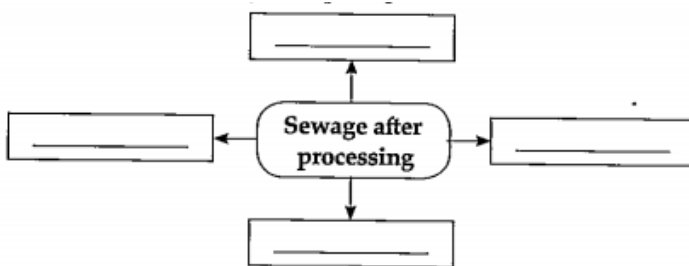


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51. Why some of the organs in human body are most valuable?

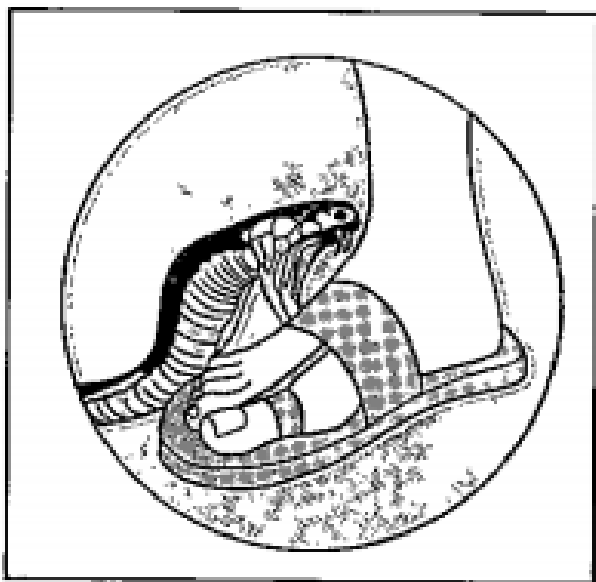
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52. Complete the following concept map:



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53. Following is the picture of a disasters.
What will be your post disaster management
in this case?



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54. Describe Darwin's theory of evolution.



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55. Which projects will you run in relation to environmental conservation? How?



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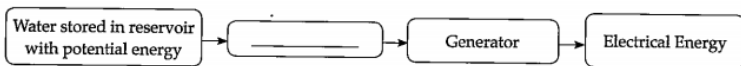
56. Explain how sewage is disposed in cities and villages?



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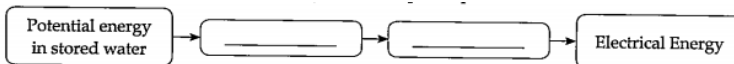
57. Fill in the blocks:

Stages of generation of Electrical energy from hydroelectric power station



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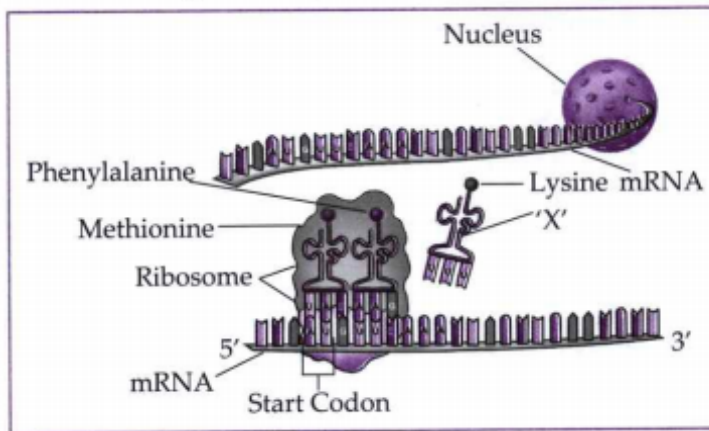
58. Step by step energy conversion in hydroelectric power plant.





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59. Observe the given diagram and answers the questions given below it.



Identify the molecule labelled as 'X' in the given diagram.



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60. Which substance forms the outer layer of their exoskeleton?



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61. What is DNA finger printing?



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62. Write the symptoms, effect and remedial measures for : Motor accident



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63. Give three examples of each:

Hobbies to reduce stress.



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64. Give three examples of each:

Diseases endangering the social health.



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65. _____ is essential for growth of the body and also for restoration of emaciated body, wound healing, formation of blood cells, etc.

A. Meiosis

B. Nutrition

C. Mitosis

D. Cytokinesis

Answer:



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66. Choose the correct alternative and write that alphabet against the sub-question number:

Vegetative propagation is performed with the help of.....in sweet potato.

- 1) root
- 2) stem
- 3) leaf
- 4)flower

A. eyes

B. roots

C. buds

D. climber

Answer:



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67. Different scientists classified the animals.

But _____ classified according to the criteria

like body size, habits and habitats.

A. Theophrastus

B. Aristotle

C. Linnaeus

D. John Ray

Answer:



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68. Subphylum Vertebrata is further divided into _____ classes.

A. four

B. seven

C. five

D. six

Answer:



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69. Sycon, Hyalozoa, Euplectella belong to Phylum _____.

A. Cnidaria

B. Annelida

C. Arthropoda

D. Porifera

Answer:



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70. Name the following: The title of the book Darwin published.



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71. Vitamins A,D,E,K : Fat-soluble : : Vitamins B and C : _____.



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72. Select the odd one out:

Prophase, Metaphase, Anaphase, Telophase



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73. In Meiosis,

Chromosome numbers leads to ___ Formation
of _____ gamets.



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74. State whether the following statements

True or False. Correc the false statements.

Geographical or reproductive isolation leads
to speciation.



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75. Distinguish between

Conventional energy resources and Non-conventional energy resources.



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76. DNA fingerprinting is useful in forensic sciences and paternity testing.



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77. What are the main features of Industrial Microbiology?



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78. State the uses of stem cells.



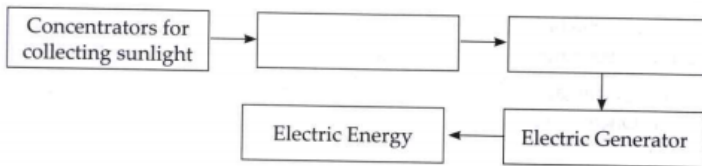
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79. Give examples of each (i) Hobbies to reduce stress. (ii) Physical problems arising due to excessive use of mobile phones.



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80. Give the different stages in solar thermal power plant.



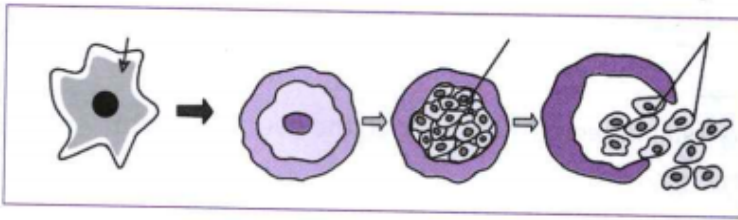
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81. What is the meaning of "Jivo Jivasya Jivanam"?



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82. Observe the diagram and explain the formation of cyst in Amoeba during multiple fission.



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83. When does the cyst rupture?



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84. How many amoebulae are released at one time?



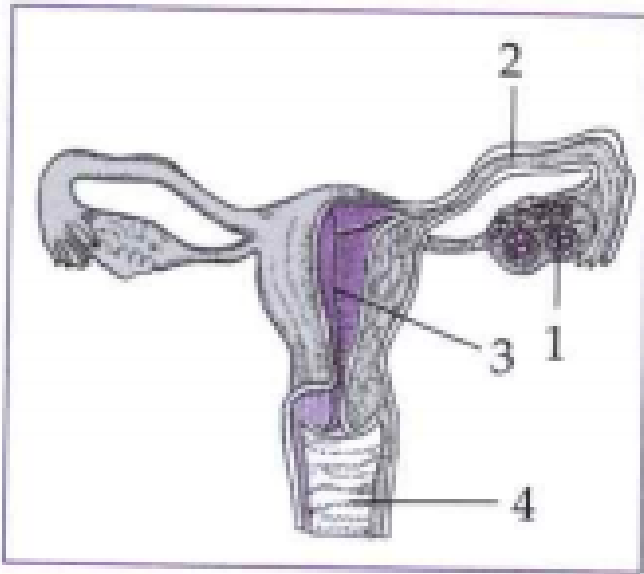
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85. Why is it termed as the 'Energy currency' of the cell?



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86. Observe the structure of Human reproductive system, and answer the following questions.



Name the organs (1,2,3 and 4).

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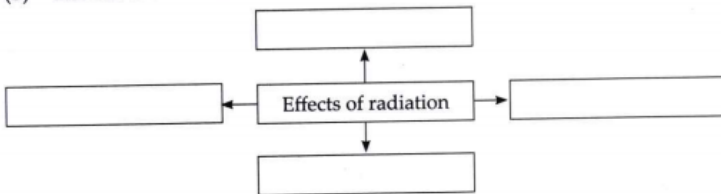
87. Answer the following question in detail:

What is radioactive pollution? What are its effects?



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88. List the effects of radiations.



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89. What will be the effect of industry established on river bank on the river ecosystem?



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90. Write the advantages and limitations of Nuclear energy:



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91. What is Green Revolution, Blue Revolution and White Revolutions?



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92. Write in brief about progressive changes in animal classification.



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